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Massachusetts 2013 Air Monitoring Network Plan

Response To Comments

8/26/13

MassDEP operates a network of 29 ambient air quality monitoring stations at locations across the state as part of a comprehensive program to provide information about air quality to the public and to determine compliance with National Ambient Air Quality Standards (NAAQS). Each year, MassDEP is required to submit to the U.S. Environmental Protection Agency (EPA) an Air Monitoring Network Plan in accordance with Title 40 CFR Part 58.10. On June 7, 2013, MassDEP published a draft 2013 Network Plan for a 30-day public comment period. MassDEP received comments from the U.S. Environmental Protection Agency Region 1 (EPA) and the Sierra Club (SC) on the draft Network Plan. MassDEP has summarized and responded to these comments below.

EPA's Comments:

1. Comment: MassDEP correctly indicates that existing monitors in Massachusetts meet the requirement to site 4 SO₂ monitors under EPA's Population Weighted Emissions Index, and as such these monitors would be required going forward. If, in the future, MassDEP sought to eliminate any of these SO₂ monitors, it would need to demonstrate that the requirement was still fulfilled. On May 21, 2013, EPA released draft Technical Assistance Documents describing in more detail modeling and monitoring guidance refining the agency's approach for implementing the SO₂ NAAQS. One outcome of that process may be a greater reliance on SO₂ monitoring in some circumstances. As such, we have initiated a dialogue with you regarding whether there are any areas in Massachusetts where additional SO₂ monitoring may have some merit.

Response: MassDEP plans to continue to operate its existing SO₂ monitors and looks forward to future discussions on how SO₂ monitoring may be used as EPA finalizes its approach for implementing the SO₂ NAAQS.

2. Comment: EPA will site at least 40 NO₂ monitors nationwide to help protect communities that are susceptible and vulnerable to NO₂-related health effects. Working closely with MassDEP, EPA has identified the Boston-Harrison Avenue, Boston Kenmore Square, and Springfield-Liberty Street NO₂ monitors to meet the obligation for NO₂ monitors to protect communities that are susceptible and vulnerable to NO₂-related health effects. We intend to formally approve those monitors for this purpose when the final plan is submitted. MassDEP is obligated to operate monitors meeting the urban community-wide monitoring requirements in the Boston area, and the existing year round monitors in Lynn or Newburyport could be utilized to meet this requirement.

Response: MassDEP acknowledges EPA's intention to approve the NO₂ monitors at Boston-Harrison Avenue, Boston Kenmore Square, and Springfield-Liberty Street as those that help protect vulnerable communities and intends to continue to operate these monitors and the Lynn and Newburyport monitors.

3. Comment: We are pleased that the Boston-Von Hillern Street near-road monitoring location has begun operation to meet part of Massachusetts' obligation to site up to five NO₂ near-road monitors. EPA's NO₂ NAAQS rule requires a second near-road NO₂ site in the Boston area operating by January 1, 2015. EPA has funded the build out of this second site. Other sites in Worcester and Springfield are required to begin operating by January 1, 2017. We intend to work closely with MassDEP to identify acceptable locations for the second Boston area near-road monitor, and are committed to working with you to identify resource saving opportunities in other parts of your network. In light of ongoing budget constraints, including possible federal cuts to overall State budgets, we recommend you consider such opportunities.

Response: MassDEP will consider a second near-road NO₂ monitor in the Boston area CBSA (MA/NH) in the context of MassDEP's and EPA's future budgets and national discussions regarding phase 2 of NO₂ near-road monitoring. Additional near-road sites for the Springfield and Worcester CBSAs also will be considered as part of future phases of NO₂ near-road monitoring.

4. Comment: As a potential cost-saving opportunity, as the Boston Von Hillern Street near-road site begins collecting carbon monoxide monitoring data, MassDEP may wish to compare it to concentrations collected at Kenmore Square, and decide if both are appropriate. That said, we recognize that the Kenmore site has been in operation for many years and that moving a single monitor from an existing location may yield limited resource savings.

Response: MassDEP will consider whether the CO monitor at Kenmore Square is necessary, as well as other resource-saving options.

5. Comment: On January 15, 2013, EPA revised the PM_{2.5} standard. In that rule, EPA also established that all continuous PM_{2.5} FEM monitors operating for more than 24 months should be used for comparison to the NAAQS unless a State specifically requests that the data be excluded and EPA approves that request. We are pleased that MassDEP has determined that 9 of its 10 continuous PM_{2.5} FEMs should be used for NAAQS compliance. The Air Quality System should be updated accordingly for these monitors. For the one remaining continuous FEM, we note that

you are requesting that the continuous PM_{2.5} FEM data from the Springfield Liberty Street monitor be excluded from comparison to the NAAQS. We expect to indicate whether we approve that request in our network approval letter upon final submission of this plan. We are hopeful that you consider the various operational successes that MassDEP has had with its other continuous monitors to help ensure improved correlation between the FEM and FRM at Liberty Street in Springfield. More frequent zero tests on the continuous monitor and quicker collection of the FRM filter has helped other monitoring agencies. We believe that MassDEP has some of the best air monitoring field technicians in the country and are optimistic that going forward, FRM/FEM correlation will improve at Liberty Street.

Response: MassDEP has updated AQS to account for the use of its FEM monitors for NAAQS compliance (with the exception of Springfield Liberty Street). MassDEP will continue to evaluate ways to increase the correlation of the FEM and FRM monitors at Springfield Liberty Street so that FEM monitor can be used for NAAQS compliance in the future.

6. Comment: EPA notes and acknowledges MassDEP's "Summary of Network Changes."

Response: MassDEP appreciates EPA's comments and continuing partnership in air quality monitoring.

Sierra Club's Comments

7. Comment: MassDEP has taken additional steps to require air dispersion modeling at certain large sources of SO₂ in the state. Sierra Club understands that MassDEP intends to use these modeled results to establish enforceable short-term emission limitations for these sources (although based on Sierra Club's review of correspondence between MassDEP and Dominion regarding the results of Dominion's modeling for Brayton Point, which the Sierra Club received immediately prior to filing these comments, the Sierra Club has serious reservations regarding the sufficiency of the limits proposed by Dominion to ensure continuous compliance with the 2010 1-hour SO₂ National Ambient Air Quality Standard). As explained in Sierra Club's 2012 comments, modeling is a preferred approach to monitoring for determining compliance with the 2010 1-hour SO₂ NAAQS. Sierra Club therefore supports a modeling-based approach to establishing short-term limits for large SO₂ sources, though reserves the right to comment more specifically on the validity of the modeling submitted to MassDEP and the translation of modeled impacts into enforceable short-term emission limits in facility permits.

Response: MassDEP acknowledges Sierra Club's preference for modeling versus monitoring for determining compliance with the 1-hour SO₂ NAAQS. MassDEP is continuing to follow the development of EPA guidance on SO₂ modeling and monitoring options and requirements. Once EPA issues final guidance and/or regulations, MassDEP will work with EPA to ensure its monitoring network meets EPA requirements, and will include any changes in future Network Plans. In the meantime, MassDEP is reviewing modeling performed by Brayton Point and Mt. Tom relative to compliance with the SO₂ NAAQS, and any SO₂ emissions limitations proposed in permits for these facilities will be made available for public review and comment prior to finalization.

8. Comment: Sierra Club also notes that modeling is likewise the most effective tool for determining the appropriate locations for siting SO₂ monitors to ensure compliance with the NAAQS. Modeling represents the most useful means of determining where localized impacts are likely to occur and should serve as the basis for determining where to site additional SO₂ monitors. Sierra Club therefore encourages MassDEP to use the results of the air dispersion modeling for the Mount Tom, Brayton Point and other large sources in Massachusetts to optimize the locations for the SO₂ monitors in the vicinity of those sources. In addition, in order to improve the SO₂ monitoring network's coverage, Sierra Club encourages MassDEP to increase the number of SO₂ monitors sited in proximity to these sources.

Response: MassDEP is continuing to follow the development of EPA guidance on SO₂ modeling and monitoring options and requirements, including source-specific monitoring. Once EPA issues final guidance and/or regulations, MassDEP will work with EPA to ensure its monitoring network meets EPA requirements, and will include any changes in future Network Plans.

9. Comment: Sierra Club reiterates its comment from 2012 that MassDEP is required to designate ozone SLAMS sites and ensure that these monitors are operated during the entire ozone monitoring season from April to September.

Response: MassDEP operates 15 ozone monitors throughout the state, all of which are designated State and Local Air Monitoring Stations (SLAMS). MassDEP operates each of these monitors during the entire ozone monitoring season, except that MassDEP cannot always access the Adams site (25-023-4002) at the summit of Mt. Greylock due to summit weather conditions. As noted in the Network Plan, MassDEP plans to move the site to a lower elevation site that can better characterize population exposures to ozone concentrations in Berkshire County. Furthermore, MassDEP routinely meets EPA's data completeness requirements for its ozone monitoring sites, with rare exception, although there are some circumstances that are beyond MassDEP's control that can affect data completeness (for instance, if a monitoring station must be moved at the request of the property owner).